DOCUMENT RESUME

ED 448 708 IR 020 471

AUTHOR	Droste, Bruce
TITLE	Running the Virtual High School.
PUB DATE	1999-10-00
NOTE	7p.; In: WebNet 99 World Conference on the WWW and Internet Proceedings (Honolulu, Hawaii, October 24-30, 1999); see IR 020 454. For the Virtual High School Web site: http://vhs.concord.org.
PUB TYPE	Reports - Evaluative (142) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Access to Education; *Cooperative Programs; *Distance Education; *Educational Cooperation; Educational Technology; Faculty Development; High Schools; Instructional Design; Instructional Development; *Instructional Innovation; Internet
IDENTIFIERS	Course Development; Technology Utilization; Web Based Instruction

ABSTRACT

The Virtual High School (VHS) is a cooperative of over 125 high schools, funded by a Technology Innovation Challenge Grant. Teachers in the cooperative, with the help of teacher mentors, instructional technology experts, university faculty, and businesses, design and offer innovative courses over the Internet. This paper discusses VHS course design, course content, costs and sustainability, and evaluation. Testimonies of VHS participants are then summarized, grouped into the following broad categories that describe the benefits of VHS and the Technology Innovation Challenge Grant program as a whole: (1) VHS expands horizons and builds communities of learners; (2) VHS is enabling teachers and students to become confident technology users; (3) VHS offers unparalleled professional development opportunities for teachers; and (4) VHS greatly increases access to courses and educational resources. (MES)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 448 708

Running the Virtual High School

G.H. Marks

Bruce Droste, Director
Virtual High School
Concord Consortium
37 Thoreau Street
Concord, MA 01742
978 371-3489
Bruce@concord.org

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Virtual High School

"I want everyone to know that this year has been the best professional development year for me in 27 years of teaching. I not only feel part of a new wave of education but I feel that I have re-fallen in love with my subject - biology." -- Richard Clevenstine, VHS teacher, Ridley High School, Folsom, PA

"Virtual High School is of special interest to us because it gives our Deaf students the opportunity to participate in classes with hearing students and teachers on a fairly equal basis without the need for interpreters. Students agreed that using the computer communication in VHS allowed them to feel comfortable interacting with the hearing students in their class." Joyce Barrett, VHS site coordinator, Model Secondary School for the Deaf, Washington DC

Abstract:

I. The Virtual High School Cooperative

The Virtual High School is an extraordinary project that is having a positive impact on thousands of high school students and hundreds of educators in schools across America. Like other Technology Innovation Challenge Grants, VHS is using the best of educational technologies to give students and teachers access to resources, curriculum, and training of the highest quality, and to prepare educators and learners to be skilled and confident participants in an increasingly technological world. Like other Technology Innovation Challenge Grants, VHS is bringing these benefits to more than just a select group of participants: VHS students and teachers represent a spectrum of different ages, ethnicities, backgrounds, learning abilities, and educational experiences. Similar to other Technology Innovation Challenge Grants, the effect VHS is having on education reaches far beyond the thousands of participants involved in the project. Teachers who have had access to the VHS professional development course find that they are bringing new technology skills, new teaching strategies, and a revitalized enthusiasm for teaching back into their local classrooms, thus passing the benefits of their experience on to countless additional students and colleagues. Students who have taken a VHS course find that the experience has helped them become independent learners and capable technology users, and they pass these skills on via daily interactions with peers, family members, and even teachers. High schools, communities, and entire states have found that the success of VHS has generated strong partnerships between corporate and educational entities, as well as support for additional technology and educational initiatives within their regions. VHS has become a model for similar programs across the country and around the world. In this testimonial, you will read about the simple yet powerful VHS model, and hear from VHS participants who talk about the far-reaching ways in which VHS has touched their lives.

IR020471

BEST COPY AVAILABLE

What is VHS?

The Virtual High School (http://vhs.concord.org) is a cooperative of over 125 high schools across the U.S. that offers netcourses taught by teachers for students in the cooperative. Each school contributes teachers who, with the help of teacher mentors, instructional technology experts, university faculty, and businesses, design and offer innovative courses over the Internet. Each school in the cooperative can enroll 20 students in these netcourses for each section of a teacher's time it contributes to the pool. [This allows schools to offer a range of courses usually found only in large high schools.] Quality is maintained by requiring each virtual teacher to successfully complete a graduate-level professional development netcourse on the design and development of network-based courses. At the halfway point in its five-year grant, the VHS project is now turning from concept development to large-scale implementation.

This academic year, there are over 100 schools in the project offering 105 courses to approximately 2,000 students. In addition, over 90 new teachers from as many schools who are completing a yearlong professional development program will offer their first courses in the 2000-2001 academic year. Thus, next year, we expect over 200 courses to be offered serving 4,000 students from at least 200 schools nationwide.

VHS Course Design

VHS courses are either one-semester or full year courses, based on an asynchronous, scheduled model structured around online discussion groups. Due to its asynchronous nature, students can access the network anytime at school or at home to read assignments, participate in discussions, and submit completed work. At the same time, courses are carefully scheduled with all the students in a course participating in the same activities and thinking about the same issues. Teachers are trained in structuring and moderating these online discussions. Without this emphasis, online courses can become conversations between individual students and the teacher thereby generating an overwhelming volume of posts. This maximizes the value of the online discussions and helps ensure that students can learn from each other and construct their own understandings. This is not only good pedagogy, but it is essential to making a manageable load for the teacher.

Most VHS courses follow a weekly rhythm that includes a major topic, assigned activities, online discussions, and student contributions. Activities have, for instance, included readings, lab experiments, music composition, critiquing a video, locating Web resources, and taking a poll. A master schedule for each course dictates these events and expectations in detail, to help ensure that all participating students are able to make meaningful contributions to the class.

Student evaluation is entirely up to the teacher who delivers each course. As part of their professional development, the VHS project helps teachers develop "alternative" evaluation strategies that foster online contributions, collaboration, and student creativity. The project insists that the evaluation methods and criteria be clearly stated as part of each course description.

VHS Courses

With over 200 courses in the current catalog, it is difficult to grasp the range of VHS courses offered. VHS courses are open to students in grades nine through twelve and address specialized content not typically available in most high schools. One powerful motivation for teachers to participate in the project is the opportunity to offer a specialized or advanced course for which there would never be sufficient enrollment in the high school. As a result, the project attracts and encourages some unusual courses. The following sampling of course titles gives a flavor of the resulting range of courses offered. This list

represents only 12 of the courses in the 1999-2000 catalog. All the course descriptions can be found online at <http://vhs.concord.org>.

101 Ways to Write a Short Story

A Shakespeare Who-Dun-It

American Music Heritage - Song and Society

AP Statistics

Biology II -- A Second Year Course

Business in the 21st Century

Calculus for Business

Career Awareness for the New Millennium

Chemistry II

Computer Graphics on the Internet

Eastern and Western Thought - A Comparison

Employability Skills

VHS Costs and Sustainability

Participation in VHS does not alter the basic teaching cost structure of a school. One or more teachers are assigned to a virtual course instead of a "real" one. Because the students enrolled in the virtual courses are outside the school district, this re-assignment reduces the number of students in the district who are taught by district staff. Assuming an average class size of 20, this loss is exactly compensated by the 20 students for each section contributed who are allowed to register in VHS courses. The net result is no change in the number of sections offered and students taught. This "zero sum" feature of the VHS has three important consequences:

Easy expansion. Each school can tailor its level of involvement to its own needs. A school that wants more students enrolled in VHS simply has to offer more sections to the cooperative. Because this decision has no cost impact on other schools, the project as a whole can easily expand to fill whatever need is generated.

Decentralization. Most virtual course projects are highly centralized, offering new courses from a distant center. This model is difficult to finance, reduces the autonomy of the recipient, and threatens school faculty. The VHS model because it is highly decentralized, avoids all these problems. One of the strengths of this national program is that it leaves control in the hands of states, schools, and local teachers and administrators.

Union acceptance. The VHS, on the other hand, has strong union support because it does not alter employment levels and does offer teachers professional development and new employment options.

Participating in the VHS, however, does entail costs. Of course, computers and network access are required. Surprisingly, this is not a major problem for most high schools, since student access to just a few computers can be spread out over time. The major costs to schools are the time required for online professional development and the local site coordinator functions. In addition, the project generates central costs for project coordination, student registration, technical support, server support, and evaluation. One of the major issues being addressed by the project is what these costs are, how they can be minimized, and whether they can be sustained.

It is reasonable to assume that VHS site management will become routine, that the technology will improve, and teacher professional development will require less time. When this happens, the VHS model will be easily and economically duplicated. Rather than simply growing the original VHS, we anticipate that there will be numerous virtual high school cooperatives. Any large district could establish one. Some might be organized around content or language. It is conceivable that highly specialized virtual high schools would be created. If all the virtual high schools adhere to the same quality standards, there can be cross-enrollments between them, increasing the range of courses and student diversity. Small high schools could become more attractive since they are no longer restricted in the courses they offer. It is even possible that the good pedagogy demanded by world-class virtual courses will spread throughout high schools.

"How are we doing?" - VHS Evaluation Efforts

More than two and a half years, three and a half semesters, and dozens of courses into the VHS project, VHS participants have gained unparalleled insight into the many factors that make up a *quality* high school netcourse. In this last year, the project has focussed on the quality of course design and delivery, with the appointment of a national standards board that has established quality standards for netcourses. This board, the NetCourse Evaluation Board, or NCEB, has synthesized the enormous expertise of university-level distance learning experts, state department of education (DoE) curriculum experts, as well as VHS teachers, trainers, administrators, and students, to create a set of netcourse standards by which all VHS courses will be reviewed. In addition, the project will appoint independent "department chairs" (content experts) who will periodically check on the progress of 5-10 netcourses for which they are responsible. The VHS netcourse standards will be adopted not only by VHS, but also by other groups who wish to develop and evaluate high-quality netcourses based on a proven national model.

II. Virtual High School Participants

The best way to begin to understand the enormous impact that VHS is having on American education is to let the VHS participants - students, teachers, site coordinators, and high school administrators - speak for themselves. VHS and all the Challenge Grant projects are designed to serve these students and educators, and they are the people who make these projects truly powerful. In the testimonies that follow, VHS participants explain the impact that the project has had on their lives. They are from different backgrounds and all walks of life. They range from 9th graders to teachers with 30 years' experience. They come from at least eighteen different states and 120 high schools across the country. They live in large urban cities and rural farming communities. What these participants' testimonies have in common is that they point to positive outcomes far greater than the designers of the project ever could have imagined. VHS students talk about the confidence they have gained not only in course subject matter, but also in taking responsibility for their own learning, and using technology and the Internet for real-world applications. Students and teachers talk about the empowerment that comes from gaining access to technology resources, hundreds of courses, and a national community of peers they'd otherwise never have access to.

Teachers talk about the shift to more encompassing teaching strategies that comes from having students of varying ages, backgrounds, and learning abilities together in one class, and about the way perspectives broaden for students who have the opportunity to learn with kids from different parts of the country. All of these lessons and skills will be invaluable to teachers and students as they move into the increasingly more technological and connected world of the 21st century. The following testimonies are grouped into several broad categories that describe the benefits of VHS and the Technology Innovation Challenge Grant program as a whole.

VHS expands horizons and builds communities of learners

"What I find most remarkable about my student's experiences is that they don't feel that they are involved in a distance learning course. They feel that they are members of a virtual high school. The difference is most important. They became part of a national community of learners and explorers. They are excited about their education. The skills and lessons they gain from the VHS program spill over into their regular high school classes. They share their virtual education with fellow students and are able to add unique perspective to regular classroom discussions. They are truly becoming self-disciplined, nationally orientated students. They have moved far beyond the boundaries of our local high school. Ironically, a number of our students have found their virtual courses to be more "real world" than their regular classes. Often the VHS courses are more self-directed, production oriented, less memory based educational experiences. They will take these lessons to college and to life. Any program that adds over one hundred courses to a high school's curriculum, enhances the students' technological skills and links them to students and teachers throughout the United States would have to be considered a great achievement. The fact that Virtual High School has been able to do this while giving the program a very personal community based feel is remarkable. It is an honor to be part of the Virtual High School experience." -- Mark McGrath, VHS site coordinator, Collingswood HS, Collingswood NJ

"..about asynchronous discussion- there are a lot of people who don't really *like* that idea. I emphatically disagree...I love it! I think it works better than face to face discussion, actually. And not necessarily for the reasons that everyone usually says "it gives people time to think about their answers" and "it helps shy students express themselves more easily", etc (although those are advantages....just not the ones that directly apply to ME :P) I like it because everything that everyone wants to say...can get said. It's not like a 'real' conversation where one person says something, and someone else responds, and then someone picks up on a tangent to THAT and you can't really go back the first thread of the conversation....or you could, but you'd have to abandon that new tangent. Either way, you lose out on something. And then there's the fact that we have a complete record of the conversation on hand...which can be useful. I really do think that this 'discussion factor' is one of the BEST things about VHS, and one

WebQuest: A Literary Odyssey!

I think that VHS is a wonderful experience, I learned not only about the subject - Russia and Soviet Union, but I also learned about myself a lot. I learned how to develop more discipline in my ability to study, I learned more about other teenagers from other vhs classes through vhs students' discussion etc. Surprisingly, I even like my vhs teacher very much! She taught me a lot. Ms Terry Haugen is really a wonderful teacher. It is not easy to do all homework on time but it is great working with her." -- VHS student, *Russian, Soviet, and Post-Soviet Studies*

VHS is a place where kids from all over the country, from all sorts of backgrounds come together and share in learning. Imagine in the future, all high schools being interconnected, and kids from everywhere having the opportunity to experience on a daily basis their peers from communities across the nation. In a nation so vast, that changes so rapidly, whose population is so diverse, we must provide the opportunity to understand each other no matter where we come from, no matter what our cultural heritage. I see Virtual High School as the vehicle for such an opportunity and an incredibly positive use of internet technology." -- John Dye, VHS teacher, *History and the Silver Screen,* Dublin Scioto High School, Dublin OH

"I am very pleased with my course and the experience I have received from it. It has helped me to become more independent and more self-disciplined when it comes to my school work. I enjoyed getting to know my classmates as well as my instructor. I am registered for another class during the spring semester and I can not wait to get started."
-- VHS student, *A Model United Nations Simulation Using the Internet*

"The English AP course I took was one of the most valuable courses I have ever encountered. I believe the success of this course and many other courses depends mainly on the teacher. I enjoyed the course

very much. It was a great learning experience. The people I met and the work I did was different from the regular coursework I had been used to. Mrs. West was a dedicated teacher, that's probably why I learned so much." -- VHS student, *AP English: A Web-Based College Level Course in Literature & Composition*

VHS is enabling teachers and students to become confident technology users

"One of our LHS students enrolled in a VHS course would not have graduated this spring without VHS. She had family problems, moved out of the house, worked full time, and had a difficult schedule. VHS was the only class she could fit into this chaos, due to the flexibility of LS. Otherwise, she would have had to attend summer school (at a personal financial cost), and would not have graduated with her class." -- Curt Stedron, VHS teacher, *Screenwriting Fundamentals*, Littleton High School, Littleton CO

"As an English teacher for VHS, I immediately noticed how open students are in their writing. I think they feel more comfortable sharing their thoughts on-line rather than in the traditional classroom. In light of all the focus lately on different high school cliques and some feeling like outsiders, VHS offers students a chance to be a part of something new. Students are not put into a category; I know them through their work. The result is a chance to really share what they think without the fear of being judged." -- Peter Stefanisko, VHS teacher, *Exploring America through its Writers*, Windsor High School, Windsor CA

VHS offers unparalleled professional development opportunities for teachers

"From a teacher's standpoint, it has given me a new adventure and definitely a new challenge. After 26 years of teaching, it has really given me the boost I needed in my teaching career. Sometimes we as teachers become complacent and do the same thing year after year. This type of course makes teaching more exciting and more meaningful. It has really given me more ideas to use in my present classes."-- Joann Collins, VHS teacher, *Exploring the Wonderful World of Multimedia*, Lincoln County High School, Lincolnton GA

VHS greatly increases access to courses and educational resources

"As the Director of Technology at a small rural school district I have found VHS invaluable to our program. With the selection of courses available to us, we can now compete with other local schools both public and private. With only 305 students in both the Jr. and Sr. High, North Brookfield notices every time a student leaves. When asked why they were leaving the response usually includes lack of course selection. With VHS this argument does not have merit. VHS has helped keep our doors open by offering high caliber classes and a teaching staff that is dedicated to educating our young people. We ask that you support VHS as much as possible so that more students have the opportunities that we have had." -- Trevor Bruso, VHS site coordinator, North Brookfield Jr/Sr High School, North Brookfield, MA

"Kalida High School is a small school of only 360 students in grades 7-12 located in the small farming community of Kalida, Ohio. Becoming a part of VHS is one of the greatest things that has happened to the students in recent years. Next year we will have students taking a wide range of courses in a variety of disciplines that was never available before. We will have a teacher teaching a course (Marketing With Probability) that we could not offer here because of a lack of enrollment. -- Dale J. Nienberg, Principal, VHS site coordinator, Kalida High School, Kalida, OH